244-17.3

416/128

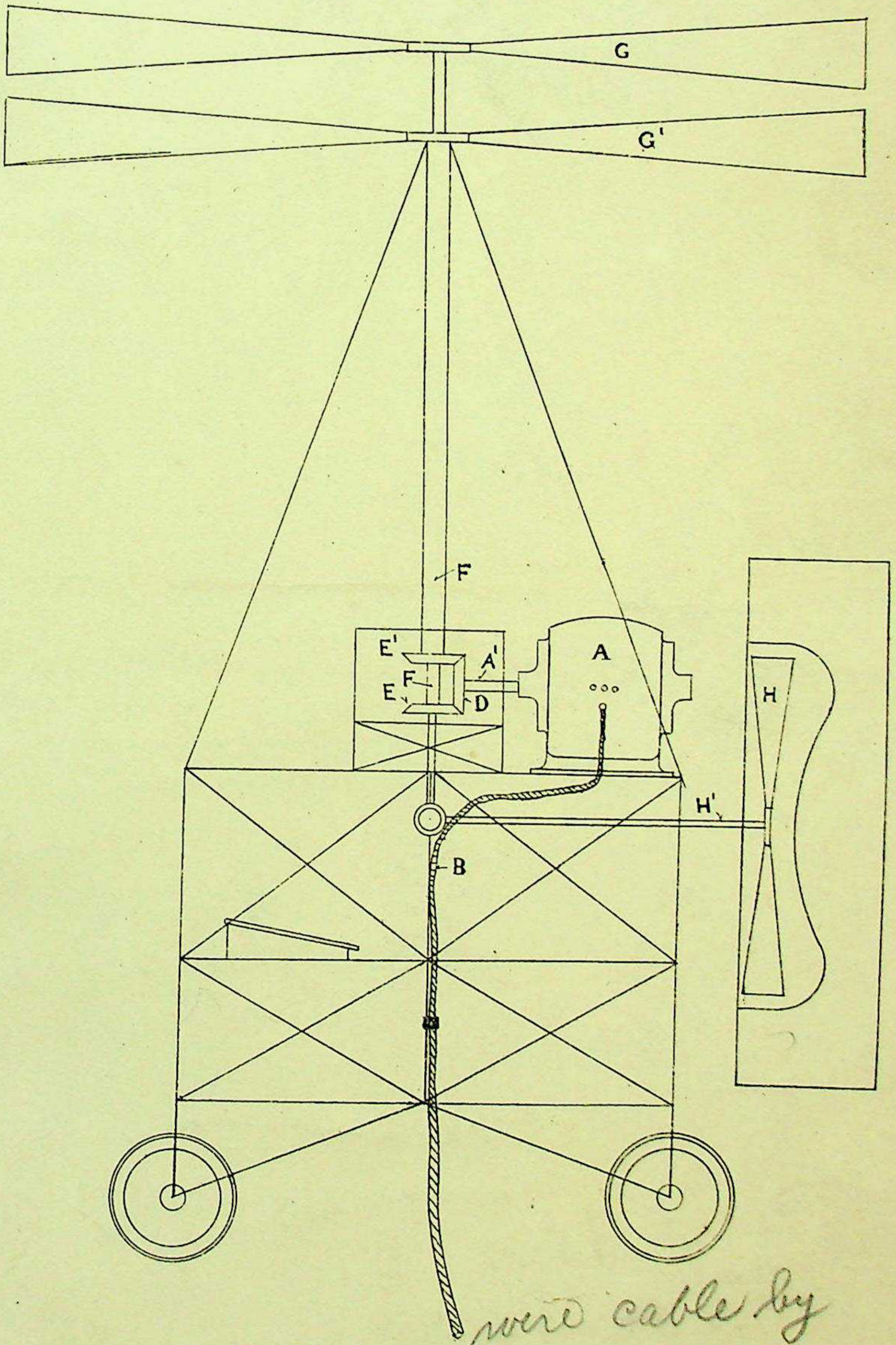
120-135.22

214-19

A.D. 1908. July 30. No. 16,153.
WOOD'S COMPLETE SPECIFICATION.

(1 SHEET)

[This Drawing is a reproduction of the Original on a reduced scale.]



wire cable by which electric current is received from automobile or the like

Malby & Sons, Photo-Litho.

3,7

244-19

Nº 16,153 A.D. 1908

Date of Application, 30th July, 1908

Complete Specification Left, 1st Feb., 1909—Accepted, 29th July, 1909

Duplicate.

PROVISIONAL SPECIFICATION.

Improvements in Aerial and like Machines.

I, Frank Wood, of 3, Rawes Street, Bank Parade, Burnley, in the County of Lancaster, Commission Agent, do hereby declare the nature of this invention to be as follows:—

My invention has reference to aerial machines designed for use in land and naval warfare, and also for service in cases of outbreak of fire, or for life-saving at sea or on land.

In the construction of apparatus designed for the said purposes, I make use of a lightly constructed aerial machine in the form of an aeroplane, or a vessel having a screw propeller or propellers placed vertically with the blades horizontally, for lifting, with a smaller screw propeller or propellers, or rudder or rudders for directing its course. Planes may be attached to keep the machine in mid-air, when impelled forward by the propelling force or when held by a cable against the wind.

The motive and directing power of the machine is derived from an insulated wire cable in connection with an electric motor carried by the aerial machine, and supplied with electricity from a dynamo, or other source of electric supply, or the aerial machine may carry a petrol motor, in which case a hempen rope may be substituted for the wire cable for haulage. The dynamo or the like may be carried by a traction engine, automobile, or the like, so as to be self-contained and readily portable. Or, if propelled by self-contained power, it can be steered in the air by means of rays or ethereal waves without the use of wires or any material connection.

The car of the machine may be constructed to find accommodation for one or more aeronauts, and shells or other explosives may be dropped on to the enemy's ships, forts, or strongholds, thereby doing damage, or at night illuminants may be dropped thereby illuminating them and locating their position, whereby they become better targets. The machine may also be used for scouting and sighting purposes, and for telegraphing, telephoning and signalling information, the electric wire therefor may be combined with the cable or separate therefrom.

When used in naval operations, the said aerial machine may be constructed as aforesaid, and the electricity derived from a suitable source on board ship.

In all these cases, the cable for supplying electricity from a stationary source may be used for haulage purposes, so that after the requisite information has been obtained, the aerial machine may be hauled back to the place whence it started by winding the cable on a winch.

Thus, the aerial machine is controlled partly by the aeronaut, and partly from the ship or field of operation, which doubly ensures the safety of the occupant or occupants.

The aerial machine may be fitted with a detachable parachute, if desired, which may be released in cases of mishap or extreme peril, and whereby the aeronaut may make good his escape.

Dated this 29th. day of July 1908.

RICHMOND & Co.,
Chartered Patent Agents,
54, Colne Rd. Burnley.

[*Price 8d.*]

COMPLETE SPECIFICATION.

Improvements in Aerial Machines.

I, Frank Wood, of 3, Rawes Street, Burnley, in the County of Lancaster, Commission Agent, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

My invention has reference to aerial machines designed for use in land and naval warfare, and also for service in case of outbreak of fire, or for life-saving at sea or on land.

In the construction of apparatus designed for the said purposes, I make use of a lightly constructed aerial machine in the form of an aeroplane, or a vessel having a screw propeller or propellers placed vertically with the blades horizontally, for lifting, with a smaller screw propeller or propellers, or rudder or rudders for directing its course. Planes may be attached to keep the machine in mid-air, when impelled forward by the propelling force, or when held by a cable against the wind.

The motive and directing power of the machine is derived from an insulated wire cable in connection with an electric motor carried by the aerial machine, and supplied with electricity from a dynamo, or other source of electric supply, or the aerial machine may carry a petrol motor, in which case a hempen rope may be substituted for the wire cable for haulage. The dynamo or the like may be carried by a traction engine, automobile, or the like, so as to be self-contained and readily portable, or if propelled by self-contained power, it can be steered in the air by means of wireless electric or ethereal waves, or rays, without the use of wires or any material connections.

The car of the machine may be constructed to find accommodation for one or more aeronauts, and shells or other explosives may be dropped on the enemy's ships, forts, or strongholds by means of apparatus controlled by the aeronaut or by means of electric waves flashed from a transmitting instrument and caught by receivers fixed to the aerial machine, thereby doing damage, or at night illuminants may be dropped, thereby illuminating the forts, *etc.* and locating their position, whereby they become better targets.

The instruments for transmitting and receiving the electro-magnetic radiations may be of any known or approved type for controlling the machine.

The machine may also be used for scouting and sighting purposes and for telegraphing, telephoning and signalling information, the electric wire therefor may be combined with the electric cable, or separate therefrom.

When used in naval operations, the said aerial machine may be constructed as aforesaid, and the electricity derived from a suitable source on board ship.

In all these cases, the cable for supplying electricity from a stationary source may be used for haulage purposes, so that after the requisite information has been obtained, the aerial machine may be hauled back to the place whence it started by winding the cable on a winch.

Thus, the aerial machine is controlled partly by the aeronaut, and partly from the ship or field of operation, which doubly ensures the safety of the occupant or occupants, or if sent up without an occupant, to ensure the safety of the machine.

The aerial machine may be fitted with a detachable parachute, if desired, which may be released in cases of mishap or extreme peril, and whereby the aeronaut may make good his escape.

My invention will be understood by reference to the annexed drawing representing an aerial machine, the motive and directing power of which is derived from an electric motor A, obtaining its supply of electricity from a cable B, which is in communication with a dynamo on land or board ship.

In the arrangement shewn in the drawing, the shaft A^1 of the motor A is fitted with a bevel wheel D in gear with two oppositely disposed gear wheels E and E^1 fixed respectively to vertical shaft F and sleeve F^1, at whose ends are fixed horizontally disposed screw propellers G and G^1, by means of which the propellers are caused to revolve rapidly in opposite directions, thereby imparting an ascending power to the machine. The directing force may be obtained by means of the vertical propeller H fixed to shaft H^1 in gear with vertical shaft F, or the machine may be independently controlled by means of electric waves flashed from transmitting instruments on sea or land, and received by receiving apparatus fixed to the machine.

I may in some cases dispense with the electric cable, and employ a petrol motor or other power as the motive force, and the aerial machine may be controlled in its flight either by a haulage rope, or independently by means of electric waves as aforesaid.

In the absence of an aeronaut, to control the machine, the illuminating bombs and explosives may be liberated by means of electric waves or clock-work mechanism, so as to be dropped at suitable intervals of time.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. In an aerial machine, obtaining the motive and directing power therefor from a supply of electricity passed through an insulating cable connecting a motor on the machine with a dynamo on land or on a ship at sea.

2. In an aerial machine, obtaining the controlling or directing power therefor by the transmission of electric waves or ethereal waves or rays flashed from transmitting instruments on sea or land.

Dated 30th. day of January 1909.

RICHMOND & Co.,
Chartered Patent Agents,
54, Colne Rd. Burnley.

Reference has been directed in pursuance of Section 7 Sub-section 4, of the Patents and Designs Act, 1907, to Specifications No. 17,859 of 1893, No. 7012 of 1897, No. 16,820 of 1897, No. 30,846 of 1897, No. 10,589 of 1901, No. 18,862 of 1901, No. 2688 of 1903 and No. 27,073 of 1903.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1909.